



Massachusetts Department of Environmental Protection
MassCleanDiesel: Clean Markets Program

Program Guidance

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Introduction

The Massachusetts Department of Environmental Protection (MassDEP) is providing funding assistance for the purchase and installation of emission reducing technologies to owners of diesel-powered trucks and equipment operating at and/or delivering goods to wholesale markets, warehouses, and distribution centers in Massachusetts. The purpose of the *MassCleanDiesel: Clean Markets Program* is to reduce public and worker exposure to diesel emissions in and around these facilities.

Total funding for the *MassCleanDiesel: Clean Markets Program* is approximately \$950,000 and is provided by the federal Diesel Emissions Reduction Act (DERA) as well as other sources. MassDEP will award grants subject to the availability of funds and the quality of applications received.

Application Deadline

Applications for this funding opportunity are due **October 31, 2011**. Only hardcopy applications with original signatures are accepted. Completed applications should be submitted to:

Susan Lyon
Diesel Grant Programs Coordinator
MassDEP
One Winter Street, 6th Floor
Boston, MA 02108

Technologies Offered

MassDEP has contracted with six vendors to supply three types of diesel emission reduction technologies for this program. MassDEP will subsidize all or part of the costs involved with the purchase and installation of the approved technologies described below:

- **Auxiliary Power Units (APUs):** APUs are small diesel engines usually installed on the side rail of the chassis near the fuel tank or behind the cab of a long-haul truck. Installed on long-haul Class 8 trucks¹, APUs allow a truck's main engine to shut down during periods of extended idling by providing cooling, heating, and electrical power. By shifting a truck's power source to a smaller engine, APUs help reduce air pollution, fuel consumption, and wear and tear on the main engine.
- **Electric Transportation Refrigeration Units (eTRUs):** eTRUs are powered by a land-based electrical infrastructure rather than diesel engines. eTRUs funded by this program would replace diesel TRUs currently mounted on detached, semi-stationary, or stationary trailers in active service. By using electricity, the eTRU eliminates diesel fuel use and its associated emissions. Applicants seeking this technology must demonstrate that adequate electrical power to support a funded eTRU either currently exists or will exist (applicants must be prepared to provide a copy of a written cost estimate by a licensed electrician to install new or upgrade existing electrical infrastructure). In addition, applicants receiving grant awards for this technology will be required to render the diesel engine of the original TRU permanently inoperable.²
- **Retrofit Devices:** Also known as exhaust after-treatment technologies, retrofit devices are installed in place of or in-line with the existing muffler of a diesel engine's exhaust system. MassDEP will fund two types of retrofits for medium-duty (14,001-26,000 lbs.) and heavy-duty (26,001 lbs. and over) on-road trucks: 1) diesel particulate filters (DPFs), which achieve an 85% or greater reduction in particulate matter;³ and 2) diesel oxidation catalysts (DOCs), which achieve at least a 20% reduction in particulate matter and other pollutants. Applicants applying for active DPFs must be prepared to provide a copy of a written cost estimate by a licensed electrician or the prequalified vendor providing the active DPF to install the required regeneration panel.

For more information regarding these technologies, their benefits, power requirements, pollution reduction potential and approved vendors, please refer to the *MassCleanDiesel: Clean Markets Technology Guide*.

Funding Levels and Cost-Share Requirements

¹ A Class 8 long-haul truck is a truck weighing 33,001 pounds or more with a cab that contains sleeping quarters for the driver and drives on average over 1,000 miles per trip.

² These services may be offered by the selected eTRU vendor at low cost.

³ To ensure a good fit, data-logging of the truck's exhaust temperature duty cycle may be required. Data-logging would be conducted by the selected retrofit vendor.

Table 1 shows the percentage funding levels MassDEP will provide for each type of technology. Grant allocations will cover equipment, installation, mileage, and data-logging (if applicable).

Table 1: Program Cost Share Requirements

Technology	Program Financing Structure	
	MassDEP Grant Allocation	Applicant Cost Share
APU Alone	50%	50%
APU + Retrofit Device	100%	0%
Retrofit Device Alone	100%	0%
eTRU	75%	25%

As presented in Table 1, MassDEP will fund 50% of the purchase and installation of an APU alone; however, if an applicant requests an APU and a retrofit device for the same truck, grant funding increases to 100% for both technologies.

MassDEP will **not** fund the following:

- Costs associated with the destruction and scrappage of the existing diesel TRU on the trailer.
- Costs associated with the installation of electrical infrastructure to support eTRUs and active DPFs requiring regeneration panels.
- Costs associated with the purchase and installation of retrofit technologies on APUs and diesel TRUs (i.e., qualified retrofit devices must be for the truck's main engine exhaust).
- Ongoing operations and maintenance costs for existing technologies, including cleaning the filter of the DPF.
- Fees for a third-party consultant or dealer hired by the grant recipient to coordinate the application or manage and administer the grant-funded activities, including coordination of the work and submission of reports and paperwork to MassDEP for the grant recipient.

Applicant Eligibility

This funding opportunity is available to entities involved in the storage and distribution of goods at wholesale markets, warehouses, and distribution centers as well as owners of over-the-road distribution trucks that service these types of facilities.

The following criteria must be met by applicants for the three technologies offered:

- **Ownership.** Applicants must own the vehicle or trailer on which a technology will be installed. Leased and rented vehicles are not eligible for grants.

- **Registration.** The vehicle or trailer upon which the technology is installed must be registered for use in Massachusetts.
- **Service Area.** The vehicle or trailer receiving a technology must operate at or service a wholesale market, warehouse, or distribution center located in Massachusetts.
- **Length of Ownership.** Applicants must retain the technology and the vehicle/trailer receiving the technology for a minimum of **two years** after the technology is installed. Owners of vehicles or trailers with installed technology will be responsible for the pro-rated cost for the technology and installation if the vehicle or trailer is sold, discontinued from use, or used exclusively in another state before the end of the two-year period.

Technology Specific Eligibility

The following eligibility requirements apply to the specific technologies:

APUs

- The vehicle must be a Class 8 diesel combination long-haul truck weighing 33,001 lbs. or more;
- The vehicle engine must be model year 2006 or older; and,
- The cab of the vehicle must be manufactured with sleeping quarters for the driver.

eTRUs

- An existing diesel TRU must be mounted on a trailer that meets all of the following conditions:
 - The trailer is detached;
 - The trailer is used for the storage of perishable items;
 - The trailer is stationary or semi-stationary and operates on-site at a Massachusetts wholesale market, warehouse, or distribution center and does not leave the facility premises; and,
 - The trailer ranges in length from 10 feet to 53 feet.
- Applicants must provide a copy of a written cost estimate by a licensed electrician to install new electrical infrastructure or upgrade existing electrical infrastructure. Failure to provide such documentation will affect the applicant's priority standing to receive funding.
- Applicants receiving grant awards for this technology will be required to render the diesel engine of the original TRU permanently inoperable.
- All waste products and refrigerants from the original diesel TRU must be disposed of in accordance with environmental regulations.

Retrofit Technologies

- The vehicle must not have a pre-existing exhaust after-treatment device in place.

- The vehicle must be a medium or heavy-duty truck (Classes 4 through 8, with a GVWR greater than 14,000 lbs.) with an engine model year ranging from 1990 through 2006.
- If a DPF is requested, the vehicle's duty cycle must be verified by the technology vendor to match the technical specifications of the device before acquisition of such technology.
- For active DPFs, applicants must provide a copy of a written cost estimate by a licensed electrician or the pre-qualified vendor providing the active DPF to install a regeneration panel. Failure to provide such documentation will affect the applicant's priority standing to receive funding.

Vendors

MassDEP has pre-qualified six vendors to provide the technologies offered under this program. Applicants must use the vendors under contract with MassDEP to participate in this grant program. Not all vendors offer the same type of technology. A list of the pre-qualified vendors is included in the *MassCleanDiesel: Clean Markets Technology Guide* and on the enclosed *Contact List for Vendors*.

Due to the complexity of the application, applicants are strongly encouraged to use a pre-qualified technology vendor to help complete the application. Applicants who do not know which vendor to use should contact MassDEP before submitting an application. MassDEP staff will assign a vendor to the applicant, depending on the applicant's preferred technology.

Cost of Technologies

Until the final payment is prepared, all costs, including equipment, labor, and mileage, are estimates. Vendors under contract with MassDEP will make every effort possible to provide the best value to the engine owner.

Application Process, Schedule and Scoring

Table 2 summarizes the application process and key milestone dates.

Table 2: Application Process and Key Milestone Dates

Task	Milestone Date
Applicant Workshops:	

Sturbridge Town Hall Veteran's Memorial Hall, 2nd floor 308 Main Street, Sturbridge, MA	10:00 am – 11:30 am Thursday, September 22, 2011
MassDEP Central Regional Office First Floor Conference Room 627 Main Street, Worcester, MA	1:30 pm – 3:00 pm Thursday, September 22, 2011
MassDEP Boston Office Conference Rooms A & B, 2 nd Floor 1 Winter Street, Boston, MA	10:00 am – 11:30 am Friday, September 23, 2011
MassDEP Southeast Regional Office Main Conference Room 20 Riverside Dr., Lakeville, MA	2:00 pm – 3:30 pm Friday, September 23, 2011
Application Deadline	October 31, 2011

Applications will first be evaluated for administrative completeness (i.e., all sections must be completed as applicable to the type of technology and, if the applicant is applying for an eTRU, then a copy of an estimate by an electrical contractor for electrical infrastructure work must be submitted). If an application is deemed administratively incomplete, MassDEP may request that the applicant submit additional information. Funding will be competitively awarded from among the pool of administratively complete applications. If grant applications exceed available funding, MassDEP will give priority to applicant fleets operating in close proximity to schools, hospitals, nursing homes, day-care facilities, areas of high population density, environmental justice communities, and areas with elevated incidences of pediatric asthma.

Once applications are selected for funding, MassDEP will send each grant recipient an award letter and an End-User Agreement that, upon execution, binds the grant recipient to all applicable federal and state requirements associated with the grant award. The End-User Agreement will also list the specific vehicles or trailers to receive emission reduction technologies.

Technology Installation Process

Upon receipt of the executed End-User Agreement, MassDEP will issue an Equipment Reservation Form to the technology vendor(s) selected by the grant recipient. This Reservation Form will serve as the purchase order for procuring the technologies. Where applicable, vendors may **separately** issue an invoice or establish credit terms with the grant recipient related to the grant recipient's cost share portion of the procurement.

The vendor will coordinate the delivery and installation of the technologies directly with the grant recipient. Upon completion of the installation, the vendor will submit a Certification Form to the grant recipient for signature, which will confirm that the equipment was received and installed on the vehicle and/or trailer consistent with the End-User Agreement. Vendors will also invoice the grant recipient for the cost share portion of the installed technology as applicable.

Payment Process

For all technologies MassDEP will pay the designated percentage grant portion directly to the vendor; the applicant will not be involved in this part of the financial transactions. For the cost share portion of the applicant, all transactions must take place between the applicant and the vendor. Two examples illustrate this process:

1. **eTRU:** In one example, the total estimated cost for an eTRU is \$15,000 (\$14,400 for the part and \$600 for labor). There are no other costs incurred by the vendor. At a 75% grant funding level for eTRUs, MassDEP would pay the vendor \$11,250 directly. The applicant would be responsible for the remaining 25% of the eTRU's cost. The applicant would pay the remaining amount of \$3,750 to the vendor directly.
2. **Retrofit Device:** In the second example, the total cost for a DOC is \$2,650 (\$2,200 for the part, \$250 for labor, and \$200 for mileage). There are no other costs incurred by the vendor. At a 100% grant funding level for retrofit devices, MassDEP would pay the vendor \$2,650 directly. The applicant has no cost share requirements and does not need to make any payments to the vendor.

Technology and Vehicle/Trailer Ownership and Use Requirements

Grant recipients are considered the owners of the requested technology as soon as the equipment vendor orders the technology. In addition, grant recipients must own and use the technology and the vehicle/trailer on which the technology is installed for a minimum of two years following the installation of the technology on the vehicle/trailer. MassDEP retains the authority to inspect the vehicles and/or engines for the technology installations at any time during this period. Grant recipients who do not comply with the terms of the End-User Agreement may be subject to actions by MassDEP, including a pro-rated reimbursement of the costs associated with the installed technology.

MassDEP Contact Information

For questions or comments contact: Susan Lyon, Diesel Grant Programs Coordinator, at (617) 556-1101 or susan.lyon@state.ma.us.